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MANUFACTURED ABRASIVES IN THE THIRD QUARTER 1997

The U.S. Geological Survey (USGS) collects quarterly data on manufactured abrasives from producers through surveys. Manufactured abrasives included in this report are fused aluminum oxide, silicon carbide, and metallic abrasives. Except where noted, the quantities given below are in metric units.

Fused Aluminum Oxide

Production data for the third quarter of 1997 were collected from four companies operating nine plants in the United States and Canada. Estimated and reported production of regular-grade fused aluminum oxide in the third quarter was 21,000 metric tons valued at \$7.7 million, or \$369 per ton. Production during the same period of 1996 was 31,800 tons valued at \$11.2 million, or about \$351 per ton. Output of high-purity fused aluminum oxide in the third quarter was withheld from this report in order to protect company proprietary information. Production during the same period of 1996 was 6,550 tons valued at \$3.8 million or \$580 per ton.

Production levels in the first three quarters of 1997 indicate that the total output of regular-grade fused aluminum oxide for the year is likely to be significantly less than in 1996. Low-cost imports of fused aluminum oxide from China appear to be a factor influencing the decline. Based on the rate of production through the third quarter, the output of regular-grade fused aluminum oxide in 1997 is projected to be 90,700 tons valued at \$33.6 million; production in 1996 was 127,000 tons valued at \$44.9 million.

According to the Bureau of the Census, 1997 imports of crude fused aluminum oxide through August were 51,900 tons valued at \$23.5 million, or an average of \$454 per ton. Of the reported imports, 81% was from Canada. Imports of refined and ground fused aluminum oxide during the same time period were 33,300 tons valued at \$25.5 million, or \$765 per ton. The top five countries exporting the largest quantities of refined and ground material to the United States, in descending order, were

China (58%), Austria (14%), Germany (13%), Canada (9%), and Italy (5%).

Exports of fused aluminum oxide through August 1997 were 8,310 tons. The exports were valued at \$13.4 million, or \$1,610 per ton.

As of July 1, 1997, the National Defense Stockpile contained 142,000 tons of crude fused aluminum oxide valued at \$18.2 million and 29,000 tons of fused aluminum oxide abrasive grain valued at \$9.9 million. All of the crude material and abrasive grain in the stockpile is authorized by law for disposal. During the third quarter of 1997, the Department of Defense sold 3,120 tons of fused aluminum oxide abrasive grain; no crude fused aluminum oxide was sold. Sales of additional crude material and abrasive grain are anticipated to occur later in the year.

Silicon Carbide

The USGS collects silicon carbide production data from three companies operating three plants in the United States and Canada. Production in the third quarter was 15,400 tons at an estimated value of \$9.3 million.

Imports of crude silicon carbide through August 1997 were 159,000 tons valued at \$53.5 million. Imports from China were 128,000 tons valued at \$34.9 million. The average price of imported crude silicon carbide, excluding Chinese crude, was \$614 per ton. The average price of Chinese crude was \$272 per ton. Imports of refined and ground silicon carbide for the same period were 15,400 tons valued at \$19.7 million, or \$1,280 per ton. During the period, China and Canada were the largest suppliers of crude material, furnishing almost all of the tonnage with shares of 81% and 12%, respectively. In descending order, China (52%), Brazil (14%), Norway (11%), Canada (8%), and Germany (6%) were the largest suppliers of refined and ground silicon carbide.

Exports of crude silicon carbide through August 1997 were 2,440 tons valued at \$2.6 million. Exports of refined and

ground silicon carbide were 10,100 tons valued at \$8.3 million.

As of July 1, 1997, the National Defense Stockpile contained 12,600 tons of silicon carbide valued at \$2.8 million. Current legislation authorizes the disposal of all silicon carbide in the stockpile. The Department of Defense did not sell any stockpiled silicon carbide during the third quarter of 1997, but plans sales for later in the year and in 1998.

Metallic Abrasives

Metallic abrasives information was collected from thirteen companies operating fourteen U.S. plants. During the third quarter of 1997, U.S. production of steel shot and grit was 61,100 tons, an 11% increase compared with the same period in 1996. Third quarter production was valued at \$27.1 million or about \$444 per ton. Based on the rate of production in 1997, total annual output is projected to be about 257,000 tons valued at \$113 million; production in 1996 reached 240,000 tons valued at \$106 million.

Shipments of steel shot and grit in the third quarter were 57,800 tons valued at \$26.1 million, or \$452 per ton. Shipments during the third quarter of 1996 were 54,900 tons

valued at \$25.2 million or \$459 per ton.

Estimated third quarter production of other types of metallic shot and grit (cut wire and reclaimed shot and grit) were 2,300 tons valued at \$3.7 million. Estimated shipments for the third quarter were 2,300 tons valued at \$3.7 million.

Imports of all types of metallic shot and grit through August 1997 were 15,300 tons valued at \$8 million, or \$520 per ton. Canada was the largest supplier, accounting for 89% of the tonnage imported.

Exports of all types of metallic abrasive through August 1997 were 17,500 tons valued at \$12.1 million, or \$689 per ton. Exports for 1996 were 24,900 tons valued at \$15.2 million, or \$609 per ton.

If you have suggestions about how we can improve this report, please call (703) 648-7721.

TABLE 1
MANUFACTURED ABRASIVES 1/

(Metric tons unless otherwise specified)

Source and Product	1996				1997					
	Third quarter		Fourth quarter		First quarter		Second quarter		Third quarter	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
United States and Canada: Production										
Silicon carbide 2/	17,900	\$8,920 e/	18,700	\$9,470 e/	18,600	\$9,090 e/	17,300	\$8,490 e/	15,400	\$9,260 e/
Crude aluminum oxide:										
Regular	31,800	11,200	28,100	9,860	21,000	7,770	26,100	9,700	21,000 e/	7,730 e/
High purity	6,550	3,800	5,480	3,220	3,540	2,030	W	W	W	W
Total	38,300	15,000	33,600	13,100	24,500	9,790	26,100	9,700	21,000 e/	7,730 e/
United States: Production										
Steel shot and grit	54,900	24,200	58,100	25,500	67,800	29,800	63,900	28,100	61,100	27,100
Other shot and grit e/ 3/	2,110	4,120	2,000	3,960	2,240	4,020	2,340	4,050	2,300	3,720
Total	57,000	28,300	60,100	29,400	70,100	33,800	66,200	32,200	63,400	30,800
United States: Shipments										
Steel shot and grit	54,900	25,200	53,500	24,300	61,300	27,700	59,600	26,900	57,800	26,100
Other shot and grit e/ 3/	2,120	4,130	2,000	3,960	2,210	3,940	2,340	4,000	2,300	3,740
Total	57,100	29,300	55,500	28,300	63,500	31,600	61,900	30,900	60,100	29,800

e/ Estimated. W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include materials for metallurgical uses and other applications.

3/ Includes cut wire shot and reclaimed shot and grit from primary producers.